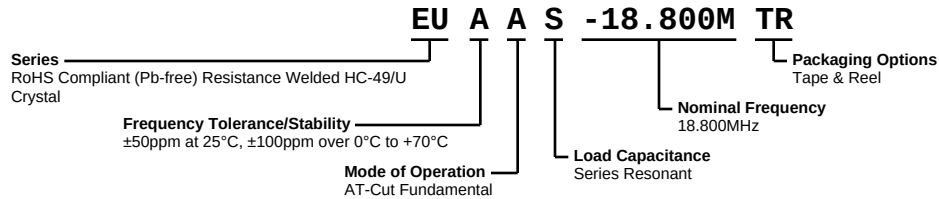


# EUAAS-18.800M TR



## ELECTRICAL SPECIFICATIONS

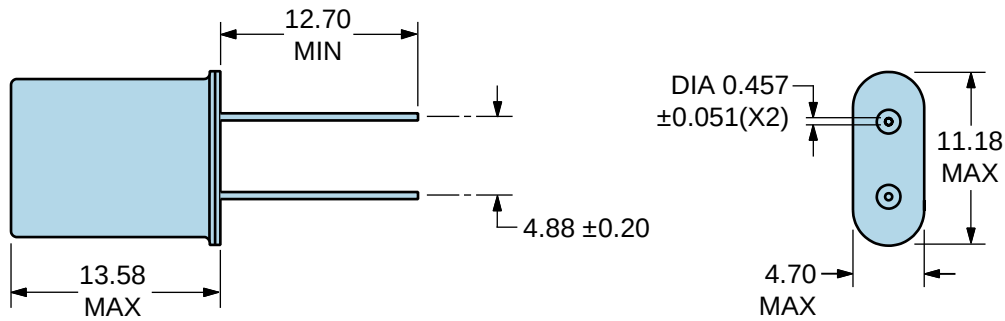
|                               |                                                                                                                    |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Nominal Frequency             | 18.800MHz                                                                                                          |
| Frequency Tolerance/Stability | $\pm 50\text{ppm}$ at $25^{\circ}\text{C}$ , $\pm 100\text{ppm}$ over $0^{\circ}\text{C}$ to $+70^{\circ}\text{C}$ |
| Aging at $25^{\circ}\text{C}$ | $\pm 5\text{ppm/year}$ Maximum                                                                                     |
| Load Capacitance              | Series Resonant                                                                                                    |
| Shunt Capacitance (C0)        | 7pF Maximum                                                                                                        |
| Equivalent Series Resistance  | 25 Ohms Maximum                                                                                                    |
| Mode of Operation             | AT-Cut Fundamental                                                                                                 |
| Drive Level                   | 2mWatts Maximum                                                                                                    |
| Storage Temperature Range     | $-40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$                                                                    |
| Insulation Resistance         | 500 Megaohms Minimum at 100Vdc                                                                                     |

## ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

|                              |                                       |
|------------------------------|---------------------------------------|
| Fine Leak Test               | MIL-STD-883, Method 1014, Condition A |
| Gross Leak Test              | MIL-STD-883, Method 1014, Condition C |
| Lead Integrity               | MIL-STD-883, Method 2004              |
| Lead Termination             | Sn $2\mu\text{m}$ - $6\mu\text{m}$    |
| Mechanical Shock             | MIL-STD-202, Method 213, Condition C  |
| Resistance to Soldering Heat | MIL-STD-202, Method 210               |
| Resistance to Solvents       | MIL-STD-202, Method 215               |
| Solderability                | MIL-STD-883, Method 2003              |
| Temperature Cycling          | MIL-STD-883, Method 1010              |
| Vibration                    | MIL-STD-883, Method 2007, Condition A |

# EUAAS-18.800M TR

MECHANICAL DIMENSIONS (all dimensions in millimeters)

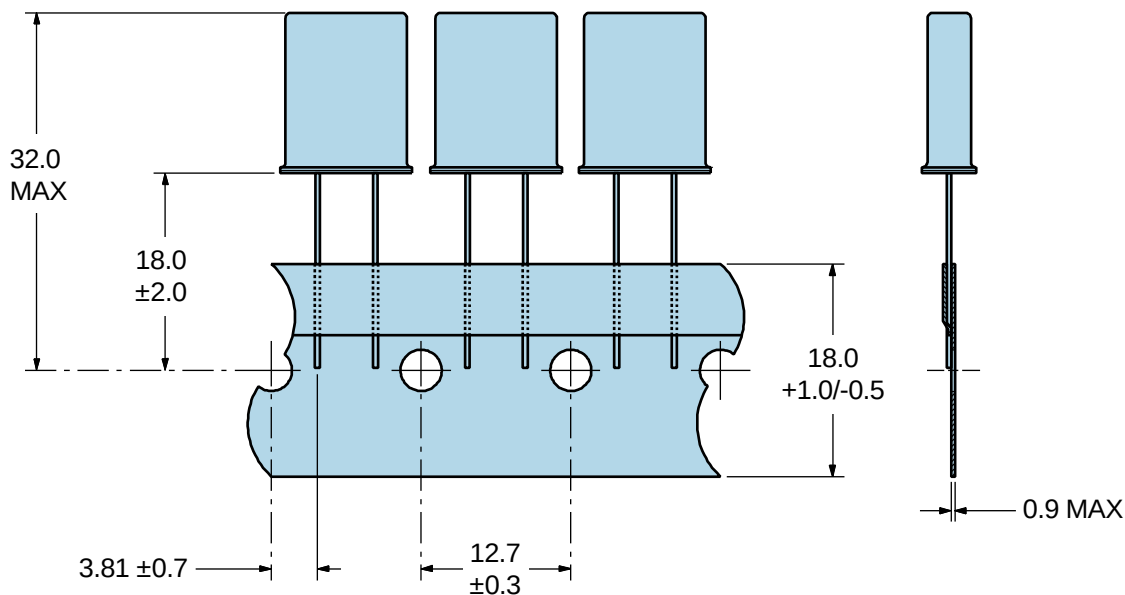


| LINE | MARKING                                       |
|------|-----------------------------------------------|
| 1    | ECLIPTEK                                      |
| 2    | E18.800M<br><i>E=Configuration Designator</i> |
| 3    | XX<br><i>XX=Ecliptek Manufacturing Code</i>   |

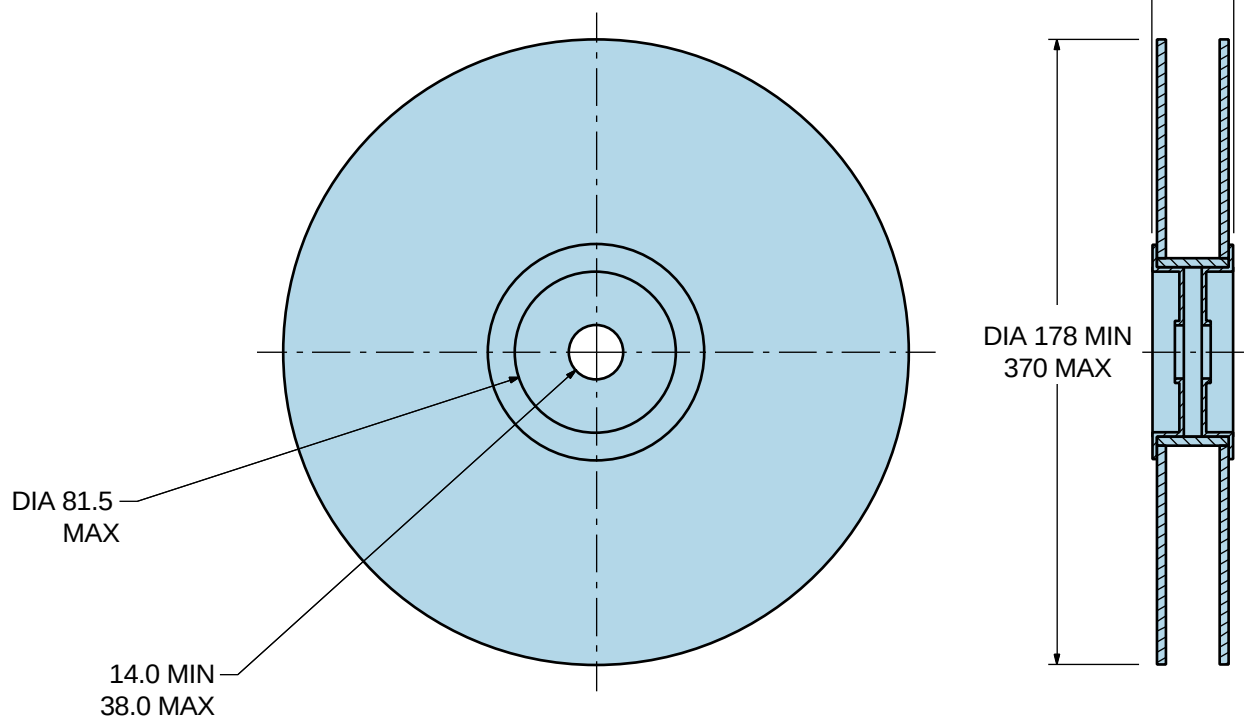
# EUAAS-18.800M TR

## Tape & Reel Dimensions

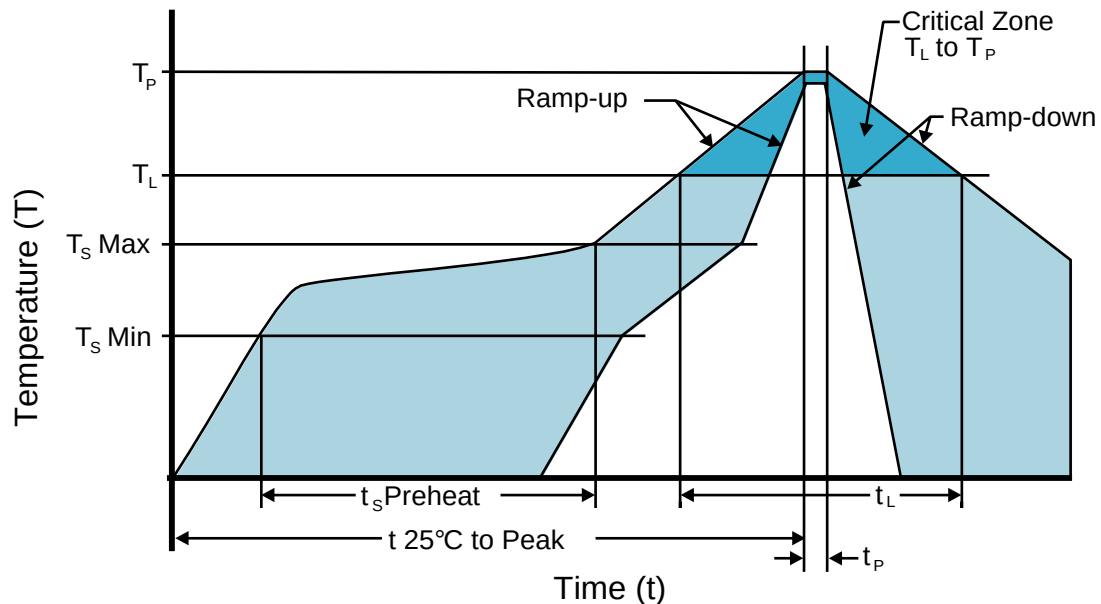
Quantity Per Reel: 1,000 units



\*Compliant to EIA 468B



## Recommended Solder Reflow Methods



### High Temperature Solder Bath (Wave Solder)

|                                                     |                    |
|-----------------------------------------------------|--------------------|
| T <sub>S</sub> MAX to T <sub>L</sub> (Ramp-up Rate) | 3°C/second Maximum |
|-----------------------------------------------------|--------------------|

#### Preheat

|                                            |                  |
|--------------------------------------------|------------------|
| - Temperature Minimum (T <sub>S</sub> MIN) | 150°C            |
| - Temperature Typical (T <sub>S</sub> TYP) | 175°C            |
| - Temperature Maximum (T <sub>S</sub> MAX) | 200°C            |
| - Time (t <sub>S</sub> MIN)                | 60 - 180 Seconds |

|                                                  |                    |
|--------------------------------------------------|--------------------|
| Ramp-up Rate (T <sub>L</sub> to T <sub>P</sub> ) | 3°C/second Maximum |
|--------------------------------------------------|--------------------|

#### Time Maintained Above:

|                                 |                  |
|---------------------------------|------------------|
| - Temperature (T <sub>L</sub> ) | 217°C            |
| - Time (t <sub>L</sub> )        | 60 - 150 Seconds |

|                                    |                                      |
|------------------------------------|--------------------------------------|
| Peak Temperature (T <sub>P</sub> ) | 260°C Maximum for 10 Seconds Maximum |
|------------------------------------|--------------------------------------|

|                                                 |               |
|-------------------------------------------------|---------------|
| Target Peak Temperature (T <sub>P</sub> Target) | 250°C +0/-5°C |
|-------------------------------------------------|---------------|

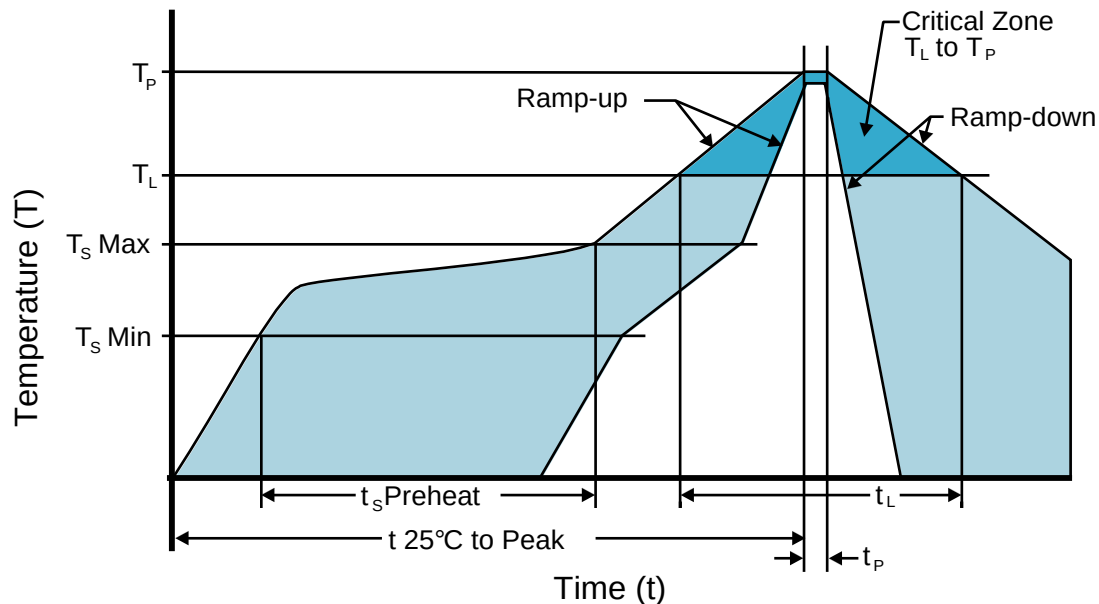
|                                                  |                 |
|--------------------------------------------------|-----------------|
| Time within 5°C of actual peak (t <sub>P</sub> ) | 20 - 40 seconds |
|--------------------------------------------------|-----------------|

|                |                    |
|----------------|--------------------|
| Ramp-down Rate | 6°C/second Maximum |
|----------------|--------------------|

|                                   |                   |
|-----------------------------------|-------------------|
| Time 25°C to Peak Temperature (t) | 8 minutes Maximum |
|-----------------------------------|-------------------|

|                            |         |
|----------------------------|---------|
| Moisture Sensitivity Level | Level 1 |
|----------------------------|---------|

## Recommended Solder Reflow Methods



### Low Temperature Solder Bath (Wave Solder)

**$T_S$  MAX to  $T_L$  (Ramp-up Rate)** 5°C/second Maximum

#### Preheat

- Temperature Minimum ( $T_S$  MIN) N/A
- Temperature Typical ( $T_S$  TYP) 150°C
- Temperature Maximum ( $T_S$  MAX) N/A
- Time ( $t_s$  MIN) 30 - 60 Seconds

**Ramp-up Rate ( $T_L$  to  $T_P$ )** 5°C/second Maximum

#### Time Maintained Above:

- Temperature ( $T_L$ ) 150°C
- Time ( $t_L$ ) 200 Seconds Maximum

**Peak Temperature ( $T_P$ )** 245°C Maximum

**Target Peak Temperature ( $T_P$  Target)** 245°C Maximum 1 Time / 235°C Maximum 2 Times

**Time within 5°C of actual peak ( $t_P$ )** 5 seconds Maximum 1 Time / 15 seconds Maximum 2 Times

**Ramp-down Rate** 5°C/second Maximum

**Time 25°C to Peak Temperature ( $t$ )** N/A

**Moisture Sensitivity Level** Level 1

### Low Temperature Manual Soldering

185°C Maximum for 10 seconds Maximum, 2 times Maximum.

### High Temperature Manual Soldering

260°C Maximum for 5 seconds Maximum, 2 times Maximum.